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DEC 17 1985

5HE-12

Mr. William K. Weddendorf
Principal Environmental Engineer
N.L. Industries, Inc.
P.O. Box 1090
Highstown, New Jersey 08520

Dear Mr. Weddendorf:

Attached for your review are the comments of David Payne, U.S. EPA -
Region V Quality Assurance Office, pertaining to the draft RI/FS
Workplan, QAPP, and Site Safety Plan submitted by O'Brien and Gere
for the Granite City Site.

This submittal represents U.S. EPA's final set of comments regarding
the above-referenced subject matter.

If you have any questions or comments, please contact me at (312)
886-4742.

Sincerely,

Brad Bradley, Remedial Project Manager
CERCLA Enforcement Section (5HE-12)

Attachment

cc: John Hooker

bcc: R. Diefenbach, 5HE-12
N. Niedergang, 5HE-12
D. Payne, 5SQA
R. Grimes, 5C-16

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: December 12, 1985

SUBJECT: Quality Assurance Project Plan (QAPP) - 2nd Submission Dated
October 22, 1985 - NL Industries, Inc., Granite City Site, Granite City, IL

FROM: James H. Adams, Jr., Chief
Quality Assurance Office

TO: Norman Niedergang, Chief
CERCLA Enforcement Section

Attention: Brad Bradley

We have reviewed the draft QAPP in question, in relation to our comments of July 31, 1985, and August 9, 1985, for the first draft QAPP by O'Brien and Gere. The second submission of October 22, 1985 is unacceptable. O'Brien and Gere did not address our comments of August 9, 1985.

The inorganic chemical waste characterizations, hydrogeological investigations, surface water investigations are limited in parameter coverage and matrix types. These studies would not be considered acceptable if they were compared to what U.S. EPA would do as a federal-lead remedial investigation.

Our Office's August 9, 1985 review considered the QAPP as not acceptable. The October 22, 1985 submission of the QAPP made few, if any, changes to the initial QAPP. The second QAPP is still not acceptable.

DETAILS

1. Attachment A to this memo is the current list of metals that are currently determined as routine analytical services (RAS) under the U.S. EPA Contract Laboratory Program (CLP). They should be considered as a guide to characterize the wastes, groundwater, etc. as required by the Work Plan. The Illinois EPA in their May, 1984 report for this site did not test for all metals in Attachment A and did not provide detection limits as low as the CLP for groundwater; however, the Illinois EPA found boron, iron, manganese, arsenic, cadmium, lead, nickel, and zinc to be of interest for future monitoring studies. O'Brien and Gere is proposing to test for only the 8 metals specified by the National Interim Primary Drinking Water Regulations.

Past Illinois EPA data for groundwater indicates sulfate, chloride, alkalinity/acidity, pH, total dissolved solids would also be of interest for this monitoring. Other parameters may also be of interest for the groundwater.

The limited scope of monitoring by O'Brien and Gere does not appear suitable for characterization of the site.

2. O'Brien and Gere proposes that metals be determined only on filtered water samples (both ground and surface waters). We recommend that groundwaters be tested both as unfiltered and filtered sample aliquots and the surface waters be tested as unfiltered sample aliquots. Suspended solids should also be determined on these samples to provide helpful data interpretation.

3. Characterization of the waste pile is to be done only by EP Toxicity testing except for total lead. This test does not provide a ready waste characterization in that it is applicable only to subsequent disposal under RCRA regulations. Lead is the only metal to be determined as a "total constituent" in the waste pile.

4. The QAPP is basically unacceptable. No changes were made between the 1st and 2nd QAPP submissions. For example, we pointed out the QC Procedures identified on page 5 of the QAPP referred to details of the CLP organic analysis program. These details were not changed and are still not applicable to the inorganic analyses for the Granite City site.

5. Attachment 3 to the QAPP provides a Laboratory QA/QC Program for the O'Brien and Gere Laboratory. This attachment is generic and still does not provide specific QA/QC details.

6. Our August 9, 1985, recommended the level of QA/QC effort will have to be markedly increased if accurate lead concentrations are to be determined in the presence of interfering sulfate concentrations. This was not addressed by O'Brien and Gere's recent submission.

RECOMMENDATIONS

1. Expand the list of chemical parameters and sample matrices (unfiltered water aliquots) to be tested. Use the CLP RAS list as a guide for metals to be tested. Other inorganic chemical parameters in water should be included (sulfate, chloride, etc.) that are leachable and are water contaminants.

2. When the list of parameters to test has been determined by Region V, O'Brien and Gere should rewrite their QAPP from scratch. We can meet with them at that time to provide guidance for the QAPP preparation.

cc: T. Rutter, ERRB
Sue Hong, CES

Table 4-2

METHOD DETECTION LIMITS FOR RAS INORGANICS FROM CLP

Element	Contract Required Detection Level ^{1,2} (ug/L)
Aluminum	200
Antimony	60
Arsenic	10
Barium	200
Beryllium	5
Cadmium	5
Calcium	5000
Chromium	10
Cobalt	50
Copper	25
Iron	100
Lead	5
Magnesium	5000
Manganese	15
Mercury	0.2
Nickel	40
Potassium	5000
Selenium	5
Silver	10
Sodium	5000
Thallium	10
Tin	40
Vanadium	50
Zinc	20
Cyanide	10

- 1: Any analytical method specified in SOV Exhibit D may be utilized as long as the documented instrument or method detection limits meet the Contract Required Detection Level (CRDL) requirements. Higher detection levels may only be used in the following circumstance:

If the sample concentration exceeds two times the detection limit of the instrument or method in use, the value may be reported even though the instrument or method detection limit may not equal the contract required detection level.

- 2: These CRDL are the instrument detection limits obtained in pure water that must be met using the procedure in Exhibit E. The detection limits for samples may be considerably higher depending on the sample matrix.